Arizona Department of Transportation
Intermodal Transportation Division
Environmental and Enhancement Group
205 South 17th Avenue
Phoenix, Arizona 85007

Final Environmental Assessment and Section 4(f) Evaluation

for

Interstate 10 Traffic Interchange at Twin Peaks/Linda Vista

Pima County, Arizona

TRACS Project No.: 10 PM 236 H5838 01D
Project No.: NH-010-D(AIW)

Approved by: Thor Anderson On: 3-2-06

THOR ANDERSON, Manager
Environmental and Enhancement Group
Arizona Department of Transportation

This environmental assessment has been prepared in accordance with provisions and requirements of Chapter 1, Title 23 USC, 23 CFR Part 771, relating to the implementation of the National Environmental Policy Act of 1969.

Federal Highway Administration
FINDING OF NO SIGNIFICANT IMPACT
FOR

Project: NH-010-D (AIW)
010-PM-236-H5838-01C
I-10; Twin Peak T.I.

The FHWA has determined that this project will not have any significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope and content of the attached Environmental Assessment.

March 14, 2006
Date

KENNETH H. DAVIS
Division Administrator

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Appendices

CHAPTER 1: INTRODUCTION

The Draft Environmental Assessment (DEA) for this project was completed and approved by the Federal Highway Administration (FHWA) on October 24, 2005. The DEA was prepared to evaluate the social, economic, and environmental impacts of constructing a new Interstate 10 (I-10) Traffic Interchange (TI) at Twin Peaks Road (hereinafter referred to as the Twin Peaks Road TI) approximately midway between the Avra Valley Road TI (milepost [MP] 242) and the Cortaro Road TI (MP 246). The proposed project will improve traffic operations on the area's transportation network, correct drainage deficiencies, address design-related issues, and improve overall connectivity of all modes of transportation within the area.

A public hearing was held on November 30, 2005 at the Twin Peaks Elementary School at 7995 West Twin Peaks Road in Marana, Arizona to obtain comments from the public on the proposed project and on the contents of the DEA. Copies of the DEA were available for public review at the Marana Municipal Complex, Sunflower Community Association, Continental Ranch Community Association, US Post Office – Cortaro Branch, Joel D. Valdez Main Library, and the Nanini Branch Library. In addition, the DEA was available on the Town of Marana and Arizona Department of Transportation (ADOT) websites.

The public comment period began on November 15, 2005 and ended on December 15, 2005. Comments on the DEA were received by letter, on written comment sheets and question cards provided by ADOT at the public hearing, and through comments taken and transcribed by the court reporter in attendance at the hearing.

This Final Environmental Assessment (FEA) should be used in conjunction with the DEA and includes the list of mitigation measures to be included in the final design specifications, errata from the DEA, a summary of the public hearing and ADOT's responses to public comments, and agency letters received during the 30-day comment period. With the completion of this FEA and with the issuance of the Finding of No Significant Impact (FONSI) by FHWA, the National Environmental Policy Act (NEPA) requirements have been met.

CHAPTER 2. MITIGATION MEASURES

The following mitigation measures were presented in the DEA and are listed here in final version. These mitigation measures will be implemented by ADOT and/or incorporated into the proposed project construction documents. Any changes to these measures have been completed in response to the comments made on the DEA. These mitigation measures supersede any of those identified in the DEA.

The following mitigation measures and commitments are <u>not</u> subject to change or modification without the prior written approval of the Federal Highway Administration.

Town of Marana Responsibilities:

1. The Town of Marana and the Arizona Department of Transportation will participate in an intergovernmental agreement, which will include the environmental mitigation contained within this document.
2. The Town of Marana will widen the low flow channel of the Santa Cruz River to prevent an unacceptable rise in floodwater elevations within the 100-year floodplain. (Refer to the Draft Environmental Assessment, page 4-19)
3. During final design, the Town of Marana will give the local floodplain administrator the opportunity to review project plans. (Refer to the Draft Environmental Assessment, page 4-19)
4. The Town of Marana will obtain an individual Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers and Section 401 Water Quality Certification from the Arizona Department of Environmental Quality before construction commences. (Refer to the Draft Environmental Assessment, page 4-21)
5. To comply with Section 402, a Stormwater Pollution Prevention Plan will be prepared for this project by the Town of Marana. (Refer to the Draft Environmental Assessment, page 4-22)
6. Prior to construction, the Town of Marana will develop a revegetation plan that will incorporate the mitigation discussed below. (Refer to the Draft Environmental Assessment, page 4-31) This revegetation plan will be provided to the contractor. Mitigation measures will include revegetation of impacted areas along the roadway and the riparian vegetation along the Santa Cruz River. Mitigation will include:
    - Disturbed soils will be re-seeded using species native to the project vicinity and will mirror the current plant composition to the extent possible.
    - Within upland areas, trees greater than 4 inches diameter at breast height and Saguaro cactus that are removed will be replaced within the overall construction footprint at a 3:1 ratio. Vegetation will be replaced in kind with a

minimum container size of 15 gallons. These replacements will not occur within the clear zone of the roadway.

- Within the clear zone of the roadway, creosote bush seed will be utilized in order to facilitate quick replacement of vegetation cover.
- Mesquite trees greater than 4 inches diameter at breast height that are removed within the high flow channel of the Santa Cruz River will be replaced at a 3:1 ratio within the overall project limits in accordance with the revegetation plan. Vegetation will be replaced in kind with a minimum container size of 15 gallons.
- Riparian trees greater than 4 inches diameter at breast height that are removed for construction will be replaced in kind at a 3:1 ratio with a minimum container size of 15 gallons.
- When fully restored, the vegetation within the Santa Cruz River will provide continuous tree cover through the project limits.
- The bottom of the bridges will be approximately 20 feet above the bottom of the low flow channel of the Santa Cruz River, which should provide sufficient height to allow pygmy-owls and other wildlife to move unimpeded under the bridges.
- The Town of Marana will provide water for all plantings outside the low flow channel of the Santa Cruz River for a period of two years to facilitate their establishment.
- The Town of Marana will monitor all plantings for a period of two years, starting at the time of planting, on a quarterly basis. Two yearly reports will be generated and submitted to the U.S. Fish and Wildlife Service and the Arizona Department of Transportation's Environmental and Enhancement Group discussing the progress of the revegetation effort.
- The revegetation plan will comply with the Arizona Native Plant Law, and Native Plant Protection Ordinances of the Town of Marana and Pima County. In addition, the revegetation plan will also include U.S. Army Corps of Engineers recommended mitigation measures for the Santa Cruz River Channel.
- The revegetation plan will be developed based on the objectives of the Tres Rio del Norte Feasibility Study. Tres Rio del Norte planning objectives related to vegetation on the Santa Cruz River include: creating a mesquite bosque at higher elevations from the Santa Cruz River bottom on terraces and over-bank areas; plant and establish cottonwood and willow tree plant communities along the wetted perimeter, and fringe area locations within the Santa Cruz River; established wetlands/Cienega at appropriate locations, to create a diverse and high value project habitat; and, reestablish desertscrub plant communities along the degraded upland portions of the Santa Cruz River

corridor, emphasizing saltbush-wolfberry and mesquite associations as components.

7. The Town of Marana will develop a Native Plant Protection Plan in accordance with local ordinances. (Refer to the Draft Environmental Assessment, page 4-36)
8. During design, a wetland delineation will be completed. In the event that jurisdictional wetlands are impacted by the preferred alternative, coordination with the U.S. Army Corps of Engineers will occur and appropriate permits will be obtained. (Refer to the Draft Environmental Assessment, page 4-39).
9. During final design, invasive species surveys will occur to determine if invasive species are present. (Refer to the Draft Environmental Assessment, page 4-40)
10. Structural elements such as walls, bridges, concrete barriers, and abutments will be constructed of materials with color and texture qualities that blend into the existing landscape. Architectural treatments will be applied to the proposed Twin Peaks Road bridge over I-10 and other visible structures to enhance the driver's perception of Marana and to be in accordance with similar projects on I-10 in the Tucson area. (Refer to the Draft Environmental Assessment, page 4-44)
11. Erosion control techniques such as slope rounding will be utilized, as necessary, to minimize impacts to visual quality. (Refer to the Draft Environmental Assessment, page 4-45)
12. Intersection lighting will be designed to minimize light pollution of night skies and limit glare into neighborhoods. (Refer to the Draft Environmental Assessment, page 4-45)
13. Methods of reducing headlight impact to residents of Continental Ranch will be considered in final design. (Refer to the Draft Environmental Assessment, page 4-45)
14. The need for sound mitigation walls will be reassessed during design. If walls will be required, the placement, type, and height will be determined during design. (Refer to the Draft Environmental Assessment, pages 4-57)
15. The Town of Marana will resurface Twin Peaks Road west to Silverbell Road with rubberized asphaltic concrete to decrease the noise generation from the tire-pavement interface. (Refer to the Draft Environmental Assessment, page 4-59)
16. Before construction, the Town of Marana will conduct detailed Phase I Site Assessments to assess site-specific potential for hazardous materials issues on parcels rated as high and medium priority. Additional investigation may include, but is not limited to, additional site reconnaissance and interviews with current and historical property owners. If parcels to be acquired involve structures, following the acquisition of the structure but prior to its demolition, the structures will be assessed for asbestos, lead-based paint, and other hazardous materials in accordance with State and Federal regulations. (Refer to the Draft Environmental Assessment, page 4-65)

17. The Town of Marana will follow the terms and conditions of the Section 106 programmatic agreement for I-10 improvements between the I-10/I-19 interchange and Tangerine Road signed by SHPO, FHWA, ADOT, and the Advisory Council on Historic Preservation in 1993 (included in Appendix D) and subsequently amended. In addition, the Town of Marana will follow the SHPO recommendations to prepare a project specific treatment plan (see letter in Appendix D). (Refer to the Draft Environmental Assessment, page 4-76)
18. Minor gaps in the cultural resources inventory will be addressed by the Town of Marana as final design proceeds. These include completion of the archeological survey on parcels that could not be surveyed previously along the eastbound I-10 frontage road and Linda Vista Boulevard because rights-of-entry could not be obtained. The Town of Marana will obtain archeological clearance before geotechnical testing for bridge and embankment piers. (Refer to the Draft Environmental Assessment, page 4-76)
19. The Town of Marana will provide plans for UPRR review to ensure that the project met current UPRR standards for bridge design and that the sequencing of construction minimized temporary disruptions to train traffic. (Refer to the Draft Environmental Assessment, page 4-99)
20. The Town of Marana will coordinate with the Cortaro-Marana Irrigation District prior to any modifications of the canal and construction will be coordinated so that the proposed improvements will not interfere with the supply of irrigation water during critical periods. (Refer to the Draft Environmental Assessment, page 4-100)
21. The Town of Marana will maintain utility coordination throughout the course of the project and schedules for any utility adjustments will be coordinated closely to minimize interruptions and inconvenience to customers. (Refer to the Draft Environmental Assessment, page 4-100)
22. Utility clearances obtained by the Town of Marana will be in accordance with the Arizona Department of Transportation requirements. (Refer to the Draft Environmental Assessment, page 4-101)

Arizona Department of Transportation Tucson District Responsibilities:

1. The Town of Marana and the Arizona Department of Transportation will participate in an intergovernmental agreement, which will include the environmental mitigation contained within this document.
2. The Arizona Department of Transportation District Construction Office and the contractor will submit the Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality and the Environmental Protection Agency. (Refer to the Draft Environmental Assessment, page 4-22)

Arizona Department of Transportation Environmental and Enhancement Group Responsibilities:

1. To prevent damage to possible buried resources at the Stewart Brickyard archaeological site, a pre-construction testing plan will be developed and implemented for this site by the Town of Marana in consultation with Arizona Department of Transportation Environmental and Enhancement Group's Historic Preservation Team. (Refer to the Draft Environmental Assessment, page 4-76)

Contractor's Responsibilities:

1. The terms and conditions of the Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers and Section 401 Water Quality Certification from the Arizona Department of Environmental Quality shall be followed by the contractor for work affecting jurisdictional waters within the project area. (Refer to the Draft Environmental Assessment, page 4-21)
2. The Arizona Department of Transportation District Construction Office and the contractor shall submit the Notice of Intent and the Notice of Termination to the Arizona Department of Environmental Quality and the Environmental Protection Agency. (Refer to the Draft Environmental Assessment, page 4-22)
3. The contractor shall clean all earth-moving and hauling equipment prior to its entering the construction site to prevent the introduction of invasive species. (Refer to the Draft Environmental Assessment, page 4-41)
4. Erosion control techniques such as slope rounding shall be utilized, as necessary, to minimize impacts to visual quality. (Refer to the Draft Environmental Assessment, page 4-45)
5. The contractor shall monitor dust generation from the construction area and limit the amount of dust generated to a maximum opacity of 20 percent. (Refer to the Draft Environmental Assessment, page 4-48)
6. If relocation of asbestos-containing water lines is required, the contractor shall handle, transport, and dispose of the material in accordance with approved federal, state, and county asbestos handling procedures. This shall include appropriate precautions to ensure that employees are not exposed to airborne asbestos fibers and that fibers are not released into the atmosphere. (Refer to the Draft Environmental Assessment, page 4-66)

Standard Specifications included as Mitigation Measures:

1. Excess waste material and construction debris shall be disposed of at sites supplied by the contractor in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction* Section 107.11 Protection and Restoration of Property and Landscape (2000 Edition). Disposal shall be made at either municipal landfills approved under Title D of the Resource Conservation and Recovery Act, construction debris landfills approved under Article 3 of the Arizona Revised Statutes 49-241 (Aquifer Protection Permit) administered by the Arizona Department of Environmental Quality, or inert landfills. (Refer to the Draft Environmental Assessment, page 4-12)
2. During construction, the contractor shall follow *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction,* Section 104.09 Prevention of Landscape Defacement; Protection of Streams, Lakes and Reservoirs (2000 Edition) and the Water Quality Standards in Title 18, Chapter 11 of the Arizona Administrative Code as administered by the Arizona Department of Environmental Quality. (Refer to the Draft Environmental Assessment, page 4-45)
3. During construction, the contractor shall control, reduce, remove or prevent air pollution in all its forms, including air contaminants, in the performance of the contractor's work in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction,* Section 104.08 Prevention of Air and Noise Pollution (2000 Edition). (Refer to the Draft Environmental Assessment, page 4-48)
4. During construction, the contractor shall control construction noise in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction,* Section 104.08 Prevention of Air and Noise Pollution (2000 Edition). (Refer to the Draft Environmental Assessment, page 4-57)
5. According to *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction, Section 107 Legal Relations and Responsibility to Public* (2000 Edition) (Stored Specification 107HAZMT, 01/15/93), if previously unidentified or suspect hazardous materials are encountered during construction, work shall stop at that location and the Town of Marana Engineer shall be contacted to arrange for proper treatment of those materials. Such locations shall be investigated and proper action implemented prior to the continuation of work in that location. (Refer to the Draft Environmental Assessment, page 4-66)
6. According to *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction*, Section 107.05 Legal Relations and Responsibility to Public, Archaeological Features (2000 Edition), if previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources and notify the Engineer. The Engineer will contact the Arizona

Department of Transportation Environmental Planning Group, Historic Preservation Team (602.712.8636) immediately and make arrangements for the proper treatment of those resources. Arizona Department of Transportation will, in turn, notify the appropriate agency(ies) to evaluate the significance of those resources. (Refer to the Draft Environmental Assessment, page 4-76)

7. Any material sources required for this project outside of the project area shall be examined for environmental effects, by the contractor, prior to use, through a separate environmental analysis in accordance with *Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction,* Section 1001 Material Sources (2000 Edition) (Stored Specification 1001.2 General), unless the facility has received prior clearance from the Environmental and Enhancement Group of the Arizona Department of Transportation. (Refer to the Draft Environmental Assessment, page 4-101)

CHAPTER 3: ERRATA FROM THE DRAFT ENVIRONMENTAL ASSESSMENT

All references to the "Preferred" Alternative are changed to "Selected" Alternative. All references to "would" in connection with the Selected Alternative are changed to "will" including the description of the alternative and associated design features and of the affected environmental and environmental consequences. In addition, all references to "would" in connection with the contractor's responsibilities are changed to "shall".

The following pages of errata include additions or alteration to clarify, further discuss, or make text corrections to the DEA, These changes are a result of agency comments and are provided below with reference to their pages from the DEA. Sections of the DEA to be deleted are shown as strikeout text (~~strikeout~~) and additions are *italicized.*

(DEA Page 1-4, paragraph 5.)
Chapter 1. Introduction
Existing Roadway Network
The FHWA Draft Classification Map, dated 2003, classified I-10 as an urban principal interstate roadway. In the area of the proposed Twin Peaks Road TI, I-10 provides ~~two~~ *three* lanes in each direction with a wide median and a posted speed limit of 75 miles per hour (mph). According to PAG, average daily traffic (ADT) volumes on the roadway vary from 52,100 vehicles per day (Vpd) north of the Avra Valley TI to 86,400 Vpd south of the Cortaro Road TI. Construction is underway on an I-10 widening project to add one through lane in each direction between the Tangerine Road and Cortaro Road TIs, which includes the Twin Peaks Road TI project area.

(DEA Page 3-17, paragraph 1.)
Chapter 3. Alternatives
El Camino de Mañana
The preferred alternative would remove the at-grade crossing of El Camino de Mañana with the UPRR. The roadway east of the UPRR would be retained for access to the Tucson Electric Power (TEP) transmission line and towers in the area and to provide access to adjacent properties. The proposed improvements would reconstruct the intersection of Linda Vista Boulevard and El Camino de Mañana approximately ~~500~~ *650* feet northeast of its current location and straighten the roadway. As a result, a portion of the existing El Camino de Mañana north of the existing intersection with Linda Vista Boulevard would be abandoned.

(DEA Page 3-25, paragraph 1.)
Chapter 3. Alternatives
Channel Design

Near the proposed intersection of Twin Peaks Road/El Camino de Mañana/Linda Vista, *the* proposed alignment of Twin Peaks Road in this area would interfere

with historic drainage patterns. Water that currently flows south across El Camino de Mañana would be blocked by the proposed roadway; therefore, a channel is proposed to convey this blocked flow southwesterly along the north side of Twin Peaks Road (see Figure 3-19). These flows would be combined with the discharge from the proposed 2-cell 6-foot by 4-foot RCBC under Twin Peaks Road. The proposed channel will be lined, have a base width of 5 feet, and provide for a depth of flow between 1.91 and 2.65 feet. Flows from this channel would continue southwest to the new channel that would discharge into the cross drainage structure at approximate I-10 MP 244.81. Routing the flows in this manner would avoid two drainage structures under Twin Peaks Road.

(DEA Page 4-5, paragraph 5.)
Chapter 4. Affected Environment and Environmental Impacts
Soils *– Existing Conditions*
Soil types were identified for the study area through a review of comprehensive maps compiled by the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) ~~compiled~~ in 2003, and the Arizona Agricultural Experiment Station in 1969. As would be expected in a fluvial depositional system, soils vary widely throughout the study area, often changing over distances of tens of feet. Soils are predominantly of the Anthony, Agua and Grabe Series.

(DEA Page 4-28, paragraph 2.)
Chapter 4. Affected Environment and Environmental Impacts
Threatened and Endangered Species *– Cactus Ferruginous Pygmy-Owl*
CFPO has been documented by AGFD as occurring within two miles of the study area north of Linda Vista Boulevard. Westland Resources, Inc. conducted surveys for CFPO during the spring of 2002, 2003, ~~and~~ 2004, *and 2005*. Surveys were conducted in the Santa Cruz River floodplain between Twin Peaks Road in the west and I-10 eastbound frontage road in the east; along Linda Vista Boulevard from its intersection with El Camino de Mañana to Thornydale Road; and along El Camino de Mañana from I-10 to Tangerine Road. No CFPO were detected during these surveys.

(DEA Page 4-33, paragraph 2.)
Chapter 4. Affected Environment and Environmental Impacts
Threatened and Endangered Species *– Conclusion*
Suitable habitat for the CFPO and the yellow-billed cuckoo is present in the project area within the Santa Cruz River Channel. Upland vegetation areas near Linda Vista Boulevard are also suitable habitat for the CFPO. The pygmy-owl and the yellow-billed cuckoo have been documented near the study area, although surveys for CFPO conducted in 2001, 2002, 2003, ~~and~~ 2004, *and 2005* have not detected pygmy-owls in the study area. Vegetation impacts in suitable habitat would be limited to riparian vegetation along the Santa Cruz River and desertscrub vegetation in upland areas along Linda Vista Boulevard and El Camino de Mañana. USFWS concurred that the Preferred Alternative would not jeopardize the endangered CFPO nor the yellow-billed cuckoo in a letter dated December 21, 2004. The USFWS concluded also that the majority of the project area does not

support CFPO nesting habitat and that, based on the proposed replacement of trees, habitat connectivity important to successful dispersal would be maintained or enhanced. Mitigation measures that would be implemented include a revegetation plan developed by the Town of Marana prior to removal of vegetation during construction.

(DEA Page 4-42, paragraph 2.)
Chapter 4. Affected Environment and Environmental Impacts
Visual Resources *– Background Views*
Middle ground views from both Twin Peaks Road and along I-10 include the Santa Cruz River. The Santa Cruz River is an important water feature that runs in a northwesterly direction through the study area. The width of the Santa Cruz River is constricted in places by bank protection and flood control measures. Suburban development characterizes the area west and southwest of the study area and industrial land uses (portland cement plant) are visible to the ~~southeast~~ *northeast.*

(DEA Page 4-49, paragraph 3.)
Chapter 4. Affected Environment and Environmental Impacts
Noise

- When the predicted level approaches or exceeds the FHWA's *Noise Abatement Criteria (*NAC*)*. ADOT defines "approach" as being within 3 dBA of the appropriate NAC. Under this policy, residential impacts would occur when the future $L_{eq}(h)$ value is 64 dBA or greater; or,

(DEA Page 4-73, paragraph 7.)
Chapter 4. Affected Environment and Environmental Impacts
Cultural Resources *– Eligibility Determination*
Previously recorded archaeological and historical sites were revisited as part of this survey and the sites were reviewed for eligibility for inclusion in the NRHP. The sites recorded initially during the field survey for this project were also analyzed for eligibility. Each of the sites is presented below in Table 4-9. ~~Four~~ *Three* sites, ~~Stewart Brickyard Site - AZ AA:12:51(ASM) ,~~ Scatter Of Hohokam Pottery Sherds - AZ AA:12:52(ASM), Disturbed Scatter Of Hohokam Pottery Sherds - AZ AA:12:146(ASM), and Antonio Alvarez Homestead AZ AA:12:370(ASM) were found to either be destroyed and no trace of the sites remained or unlikely to yield important information about the area and its history; therefore, these sites are not discussed further.

(DEA Page 4-81, paragraph 2.)
Chapter 4. Affected Environment and Environmental Impacts
Socioeconomics *– Minority Groups/ Title VI/Environmental Justice*
Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. EO 12898 *Federal Actions to Address Environmental Justice to Minority Populations and Low Income Populations* requires federal agencies to consider impacts to minority

and low income populations as part of environmental analyses to ensure that these populations do not receive a disproportionately high number of adverse human health impacts as a result of a federally funded project. FHWA issues a guidance document that establishes policies and procedures for complying with this EO in relation to federally-funded transportation projects (FHWA 1998). This guidance defines a "disproportionately high and adverse effect as one that is predominately borne by, suffered by, ~~of~~ *or* that is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority population and/or the non-low-income population.

(DEA Page 5-1, paragraph 12.)
Chapter 5. Public Involvement/Project Coordination
General Agency Scoping Meeting – Comments and Response Summary
A general agency scoping meeting was held on September 29, 2003 to solicit comments and concerns related to the Twin Peaks Road TI. ~~A list of agencies invited to attend or to submit comments by telephone, electronic mail, or mail and a~~ *A* copy of the invitation letter is included in Appendix A. Those agencies and utilities that attended the meeting included: Marana Town Council, Marana Town Manager, Marana Public Works Department, Marana Planning Department, Marana Police Department, PAG, PCDOT&FCD, ADOT, Northwest Medical Center, and Trico Electric. Correspondence received from agencies in response to this request may be found in Appendix A.

(DEA Page 5-4, comment 5.)
Chapter 5. Public Involvement/Project Coordination
Property Owner Informational Meeting – Comments and Response Summary

Comment: Will there be sound walls along Twin Peaks Road?
Response: The traffic noise analysis recommended sound walls only along the ~~west~~ *east* side of Continental Ranch south of Twin Peaks Road. The existing privacy walls along Twin Peaks Road are effective at mitigating traffic noise (see Chapter 4, Noise Section, page 4-49).

(DEA Page 5-12, paragraph 1.)
Chapter 5. Public Involvement/Project Coordination
Public Information Open House #2 – Comments and Response Summary
In addition to meetings with the general public and residential property owners, a number of meetings occurred with the affected business community. Because the business owners had different concerns (e.g. acquisitions and access) than the residential property owners (e.g. noise and traffic), separate meetings were held. This allowed discussion at a greater level of detail than would be possible in general public meetings. Although numerous meetings have occurred over the course of the project, the larger of these meetings are summarized below. Most of the comments received from the business community in the project area have involved R/W acquisitions, access limitations to the frontage road, timing of R/W acquisitions and construction, business visibility from the interstate, and billboard locations. ~~More~~

~~complete descriptions of these meetings and summaries of comments may be found in Appendix A.~~

(DEA Page 5-12, paragraph 12.)
Chapter 5. Public Involvement/Project Coordination
Hearing
The Draft EA ~~would be~~ *was* made available for public review and comment. To facilitate public involvement, a public hearing to explain the project and its environmental consequences ~~would be~~ *was* held in the study area *on November 30, 2005 at the Twin Peaks Elementary School at 7995 West Twin Peaks Road in Marana, Arizona*. Comments received at the public hearing and during the 30-day review and comment period *(November 15, 2005 to December 15, 2005)* ~~would be~~ *were* incorporated into the Final Environmental Assessment (FEA) prepared for this project. The FEA ~~would be~~ *has been* used to determine the final environmental impacts for the project.

CHAPTER 4: PUBLIC COMMENTS AND RESPONSES

The following table summarizes the comments received since publication of the DEA and presents the project response to these comments. The full text of the comment may be found in Appendix D.

Comments Received and Responses to Comments	
Comment/Question	**Response**
The Pima County Flood Control District (PCFCD) did not receive a map exhibit in the Bridge Hydraulics Report (BHR) for the project.	The map was provided to the PCFCD.
The PCFCD recommended that the Corps of Engineers' HEC-6 model be used for the sediment transport analysis in the BHR.	A HEC-6 model will be prepared and the results will be compared to the model used in the BHR.
Provide a table in the BHR showing water surface elevations for all three alternatives and existing conditions at all cross-sections.	A table providing the water surface elevations for the alternatives will be provided. Elevations at the top of the high flow channel bank protection will also be provided.
The abutment scour depths shown in the BHR for the east (4.60 feet) and west (2.94 feet) sides of the high flow channel of the Santa Cruz River appear to be underestimated because zero abutment lengths were entered.	The abutment lengths for the abutment scour analysis were corrected and the calculations were performed again. The resulting east and west abutment scour depths were 15.9 feet and 28.4 feet, respectively.
The bridge alternative spanning the entire high flow channel width of 2000 feet should be given further consideration.	This alternative failed to limit increases in the base flood elevation to 0.1 foot as required by the Town of Marana. This alternative would require also reconstruction of the existing Twin Peaks Road approach to place the bridge above the water surface elevation and meet the freeboard requirement. Reconstruction of Twin Peaks Road would require acquisition of homes in Continental Ranch.
The HEC-RAS model in the BHR used a debris blockage factor for bridge piers of 100% (i.e., pier width of 9 feet is used in the calculations, instead of the actual width of 4.5 feet). Please verify if this is correct.	After discussions with PCFCD on December 20, 2005, it was indicated that seven feet (1 foot on either side of the assumed 4.5-foot pier) could be used; therefore, seven feet will be used in the calculations.
The Town of Marana is responsible for the Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) processes that may be required by the Federal Emergency Management Agency.	The CLOMR and LOMR processes will be followed, as necessary.

PCFCD requires copies of the HEC models used in the BHR for inclusion with the District's overall Santa Cruz River watershed system modeling efforts.	Copies of the HEC models will be provided to PCFCD.
PCFCD requires a copy of the HEC-RAS model used in the BHR to confirm that the appropriate contraction and expansion coefficients were used in the development of the model.	A copy of the HEC-RAS model will be provided to PCFCD.
The BHR needs to provide more details on location and elevations of existing bank protection on the cross-sections.	The analysis used older, less accurate mapping data. Recent aerial mapping completed for this project will provide better elevational information.
Long-term River channel degradation should be reviewed to determine the applicability to the scour analysis.	PCFCD will provide this information for inclusion in the analysis.
The Section 404 permit for the project will need to provide for the removal of deposited material under the bridge.	The Clean Water Act Section 404 permit prepared for this project will provide for removal of blockage material.
If a grade control structure is needed in the River channel, this would be an appropriate time to consider it.	Grade control structures downstream of the bridge will be considered in final project design.
Additional analysis is needed in the BHR to determine the impact of the channel taper on River flows. Will water be forced out of the low flow channel onto the high flow channel?	Additional calculations will be performed to check this possibility; however, the initial analysis suggested that the design taper is gradual enough to avoid creating a hydraulic jump.
The Town will be responsible for securing all permits associated with the project including the Section 404 permit.	The EA recognized the regulatory requirement of obtaining a Clean Water Act Section 404 permit from the Corps of Engineers prior to project construction and committed the Town of Marana to obtaining this permit.
The existing vegetation along the high flow channel of the River was a mitigation requirement of the original 404 Permit. The loss of this mitigation vegetation must be considered.	As stated in the EA, and as discussed in prior meetings with Pima County and the Corps of Engineer's consulting engineer for the Tres Rios del Norte Project, a revegetation plan will be prepared for this project as mitigation for vegetation removal.
Placement of the bridge embankment fill within the high flow channel will prevent naturally occurring runoff from reaching the vegetation in this area.	The Town has committed to providing irrigation water for the landscaping treatments to facilitate establishment of vegetation within the Santa Cruz River's high flow channel. During final project design, drainage accommodations will be considered in the development of the revegetation/landscaping plans.
The Marana Shared Use Path as noted on the concept layout is a great asset to providing continuation of the National Historical Trail system.	Comment is noted in the project record.

Insure that adequate room exists for the shared use path and for a separate equestrian trail.	The project will provide pedestrian and bicycle connections between the existing sidewalk and shared use lanes on Twin Peaks Road, the Santa Cruz River Shared Use Path, and the Juan Bautista de Anza Historic Trail.
Training dikes may assist in guiding flows to the opening between the bridge embankments.	The need for training dikes will be determined during final project design.
Will there be any weight restrictions on trucks using Twin Peaks Road?	At this time, weight restrictions for trucks are not required on Twin Peaks Road following construction.
Will there be a traffic signal at Twin Peaks and Coachline?	A new traffic signal at the intersection of Twin Peaks Road and Coachline Road will be provided (refer to EA, Chapter 3, *Alternatives.)*
Please complete the project quickly.	Comment is noted in the project record
Please start the project as soon as possible.	Comment is noted in the project record.
A noise wall on the western side of the northern access road is needed to mitigate noise to residences on the east side of Continental Ranch.	The access roads will have low traffic volumes (estimated to be approximately 7,500 to 8,800 vehicles per day by the year 2030) and these roads are over 1,000 feet distant from the nearest residence in Continental Ranch; therefore, these roadways will not contribute substantially to traffic noise levels in Continental Ranch and mitigation for these roads is not appropriate. According to the traffic noise analysis completed for this project, the largest contributor of noise to the Continental Ranch area will be Twin Peaks Road.
The noise readings shown in the EA do not appear to accurately reflect peak noise levels in the area.	The traffic noise levels shown in Table 4-7 of the EA are not peak noise levels, but the highest of three readings collected at each monitoring site. According to Federal Highway Administration guidelines, the sound level meters that record traffic noise levels integrate sound levels over a period of time. These "time-weighted" average sound levels are shown as an equivalent hourly sound level in decibels. The peak noise levels are included in these equivalent levels.
Since the noise readings were taken, two lanes have been added to I-10 in the area.	The lanes were added to the inside of the freeway, which has little effect on residences distant from the interstate. The future noise level modeling performed for this project used predicted freeway volumes for the year 2030; therefore, increased traffic was considered.
It is a bad idea to put a very high wall next to residences in Continental Ranch to mitigate traffic noise.	As discussed during the public hearing (see Public Hearing Transcript in Appendix C), it is understood that the proposed noise mitigation walls along the east side of Continental Ranch would impact views and would have other effects to the shielded residences. As a result, the wall will not be constructed if a majority of the property owners who would benefit from the wall do not want the wall constructed. The preferences of the property

	owners will be established by individual meetings with property owners later in project design.
The project is much needed and overdue.	Comment is noted in the project record.
Great project design.	Comment is noted in the project record.
What is the funding source for the project?	Funding is being provided in the form of Federal earmarks, State Highway User Revenue Funds, Regional Highway User Revenue Funds and Marana Development Impact Fees.
The EA studied Linda Vista Boulevard all the way to Thornydale Road. Is there a possibility of traffic signals at the intersections of Linda Vista Boulevard with Hartman Land and Camino de Oeste?	Traffic signals are not recommended at this time for the intersections of Linda Vista Boulevard with Hartman Lane and Camino de Oeste.
This interchange is desperately needed.	Comment is noted in the project record.
Is sound mitigation being considered for the Hartman Vista Subdivision, which is west of Hartman Lane and south of Linda Vista Boulevard?	At the time of the noise study, there were no homes constructed west of Hartman Lane and south of Linda Vista Boulevard. During final design, the noise analysis will be repeated to address the project's final alignment and any new homes constructed or planned since the prior analysis. If additional mitigation is warranted, it will be recommended at that time.
We need this I-10 access as soon as possible.	Comment is noted in the project record.
Are weight restrictions on Coachline Boulevard being considered?	At this time, weight restrictions are not required on Coachline Boulevard following construction.
This project is desperately needed.	Comment is noted in the project record.
I am concerned about traffic noise levels along Twin Peaks Road west of Coachline Boulevard. A wall along the outside of the Twin Peaks Road bridges over the Santa Cruz River is recommended.	According to the noise modeling performed for this project, levels approaching the federal criteria are not predicted anywhere within Continental Ranch by the year 2030. The traffic noise analysis considered noise abatement walls along the east side of Continental Ranch, along both sides of Twin Peaks Road, and combinations of walls along both Twin Peaks Road and the east side of Continental Ranch. Although combinations of walls could reduce noise levels at several residences along the east side of Continental Ranch, the use of two walls resulted in total wall costs that exceeded ADOT's cost effectiveness criterion. During final design, the noise analysis will be repeated to address the project's final alignment and any new homes constructed or planned since the prior analysis. If additional mitigation is warranted, it will be recommended at that time.
We believe this project will improve our access onto Silverbell Road from Petite Place.	According to the traffic report prepared for this project, over 12,000 vehicles would be displaced from Silverbell Road north of Cortaro Road by the completion of this project. As a result, access to Silverbell Road from Petite Place would improve.

A traffic signal at Twin Peaks Road and either Clover Way or Palm Canyon should be considered.	Traffic signals at the intersections of Twin Peaks Road with Silverbell Road, Coachline Road, and the new access road east of the Santa Cruz River will create gaps in traffic that will facilitate access to and from Twin Peaks Road from the Coventry Homes development. At this time, traffic signals are not recommended at Clover Way and Palm Canyon Drive.
The project is desperately needed.	Comment is noted in the project record.
The alignment for El Camino de Mañana conflicts with the proposed Cascada Development plans.	The final alignments for El Camino de Mañana and Linda Vista Boulevard are subject to modification in final design. Coordination between Red Point Development and the Town of Marana has occurred throughout project development and will continue throughout final design. This coordination will ensure the compatibility of both projects.
Congestion on Cortaro Road at I-10 impairs emergency response through this area.	Reductions in traffic volumes and congestion on Cortaro Road are anticipated following construction of the new interchange.
The new interchange will improve response times from the proposed fire station on the east side of I-10/Linda Vista.	Comment is noted in the project record.
One hydrant should be planned on both the east and west sides of the interchange.	The locations of hydrants will be established during final project design.
3M Opticom systems should be provided at all new traffic signals.	3M Opticom emergency pre-emption systems will be included in the specifications for the traffic signals under the jurisdiction of the Town of Marana. For traffic signals under the jurisdiction of ADOT, Northwest Fire/Rescue District must follow the established process used by emergency providers to request and fund a specific pre-emption system (such as the 3M Opticom).
This interchange has been designed with the same problem as every intersection north of I-10 and I-19 - at-grade crossings of the railroad tracks.	This statement is incorrect. A vital part of the proposed Twin Peaks TI is the grade-separated crossing of the UPRR. Please refer to Chapter 2, *Purpose and Need* for a discussion of the need for the grade-separated crossing and Chapter 3, *Alternatives* for a discussion of the preliminary design of the crossing.
We want the interchange to move forward as quickly as possible.	Comment is noted in the project record.
Additional freeways in the Tucson area are needed.	The comment is beyond the scope of this project.
We are concerned about access onto Twin Peaks Road from the Sunflower Subdivision after the interchange is constructed.	Comment is noted in the project record.
After the interchange is constructed, access to Twin Peaks Road from the	Comment is noted in the project record.

Sunflower Subdivision will be more difficult.	
Other than resurfacing Twin Peaks Road, what other noise mitigation is proposed for residences along Twin Peaks Road?	Noise levels approaching or exceeding the Noise Abatement Criteria of FHWA were not predicted within Continental Ranch. As a result, noise barriers are not proposed along Twin Peaks Road. However, during final design, the noise analysis will be repeated to address the project's final alignment and if additional mitigation is warranted, it will be recommended at that time.
This interchange is long overdue.	Comment is noted in the project record.
Build it faster.	Comment is noted in the project record.
We look forward to continuing to work with ADOT on the drainage issues to the south, which involve the River and the golf course.	Coordination between the Town of Marana and the ADOT Drainage Engineer for the project has occurred throughout project development and will continue throughout final design.
The single point urban interchange should be the preferred design.	A single point urban interchange was evaluated as an alternative interchange concept. As discussed in the EA in Chapter 3, *Alternatives*, with one-way frontage roads, the single point urban interchange would result in reduced operational efficiency and increased delays. As a result, the diamond interchange concept was selected over the single point urban interchange.
The interchange ramps should not be constructed on hills or curves and merge lengths are insufficient.	The Twin Peaks TI will be designed in accordance with the latest ADOT Roadway Design Guidelines and guidelines of the American Association of State and Highway Transportation Officials. These guidelines provide standard ramp geometrics at entrances and exits to and from an Interstate Highway and other criteria. The final design will be reviewed by ADOT to ensure the design follows the guidelines.
The roadway design should be the first priority, then the environment, then visual treatments, then sound walls.	The proposed project is the recipient of federal funds and involves modifications to a federal facility (I-10); therefore, the procedures and processes outlined in the National Environmental Policy Act must be followed.
Design should be performed by reputable, experienced, registered engineers.	Comment is noted in the project record.
Camino de Mañana is used as a short-cut to Tangerine Road by construction vehicles.	Comment is noted in the project record.
The maintenance of Camino de Mañana is poor.	The comment is beyond the scope of this project.
The federal government is urged to receive written confirmation that Camino de Mañana is capable of withstanding the traffic volumes on the day the interchange opens.	The Design Concept Report for this project took into consideration the traffic volumes anticipated at the opening of the project to traffic.

During construction, residents east of the UPRR will need to drive farther to access I-10.	Comment is noted in the project record.
During construction, a temporary road connecting Camino de Mañana to the I-10 frontage road should be provided approximately 1/2 way between the Twin Peaks Road and Avra Valley Road interchanges.	Temporary access to the westbound I-10 frontage road would require additional right(s)-of-way and the construction of an additional at-grade railroad crossing, which would be abandoned after the Twin Peaks TI was constructed. The Town of Marana will not pursue a temporary at-grade crossing because alternative routes of accessing I-10 are available.
School bus routes will be severely impacted during construction.	During final project design, construction zones, road closures and detour routes will be reviewed with representatives of the Marana Unified School District (as well as representatives of other key road user groups such as police, fire, emergency medical providers, transit, and community services) to identify impacts on school bus routes and methods to minimize identified impacts.
Provide a safe roadway and interchange design.	The Twin Peaks TI has been and will continue to be designed in accordance with the latest ADOT Roadway Design Guidelines and guidelines of the American Association of State and Highway Transportation Officials to provide a safe and efficient facility for all users.
Develop El Camino de Mañana for the heavy truck traffic it will see, without impacting the residents during construction.	The comment is beyond the scope of this project.